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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,161

10/26/2006

Tomohiro Murakoso

MAT-8897US

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7590

04/27/2010

RATNERPRESTIA

P.O. BOX 980

VALLEY FORGE, PA 19482

EXAMINER

BREVAL, ELMITO

ART UNIT

PAPER NUMBER

2889

MAIL DATE

DELIVERY MODE

04/27/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,161	Applicant(s) MURAKOSO ET AL.	
	Examiner ELMITO BREVAL	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on 04/19/2010 has been entered.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/19/2010 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Kwon et al., (US. Pub: 2005/0052137) of record.

Regarding claim 4, Kwon ('137) teaches (in at least figs. 1, 3 and 7) a plasma display panel comprising: a first substrate (100); plural pairs of display electrodes (102, 103), each pair consisting of a scanning electrode and a sustaining electrode which are arranged parallel to each other on the first substrate (100; best seen in fig. 7); a second substrate (110) disposed opposite to the first substrate such that a discharge space is formed between the first substrate and the second substrate; plural data electrodes (21 of figs. 1 and 3; and 112 of fig. 7; i.e. the address electrodes) disposed on the second substrate in a direction perpendicular to the display electrodes (best seen in fig. 7), wherein data electrodes disposed at opposite peripheral portions of the second substrate are wider than a data electrode disposed in a central portion of the substrate (best seen in figs. 1 and 3; [0018]; [0037]-[0038] i.e. expanded portions that formed at the beginning region and the end region of the address electrode).

Regarding claim 7, Kwon ('137) teaches (in at least figs. 1-3) the data electrodes (21; i.e. the address electrodes) disposed at opposite peripheral portions of the second substrate are arranged symmetrically by width with respect to the data electrode disposed in the central portion of the second substrate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (JP: 2003-308783) of record in view of Kwon et al., (US. Pub: 2005/0052137) of record by the examiner.

Regarding claim 1, Uchida ('783) teaches (in at least figs. 1, 2, and 6; also see the applicant provided English translation of the foreign reference) a plasma display panel driven by plurality of subfields forming one field, the subfields comprising: a writhing period during which writhing discharging occurs in discharge cells to be displayed; and a sustain period during which sustain discharging occurs in the discharge cells in which the writing discharging occurs during the writing period, the plasma display panel comprising: a first substrate (5; i.e. the front substrate), a plurality of pairs of scanning electrodes (2a) and sustaining electrodes (2b) arrayed oppositely and parallel in one direction, and a back substrate (6; i.e. the second substrate) with a plurality of back electrodes (1A; i.e. the data electrodes) arrayed in the other direction perpendicular to the scanning electrodes, with barrier ribs (7) in between to form discharge spaces; wherein the plurality of back electrode (1a; i.e. the data electrodes) entering the discharge spaces at an entry side on a data driver extend with an electrode

width constantly wide from the entry side (i.e. the peripheral portion) and constantly narrow from the middle to the end side.

However, Uchida ('137) does not expressly disclose at least one data electrode of the data electrodes being wider at opposite peripheral portions of the second substrate than in central portion of the second substrate.

Further regarding claim 1, Kwon ('137) in the same field of endeavor teaches a plasma display panel comprised of, in part, at least one data electrode (21 of fig. 1) of the data electrodes being wider at opposite peripheral portions of the second substrate (110 of fig. 7) than in a central portion of the second substrate for the purpose of improving the stability of the address discharge to the discharge cells, and also to maintain a uniform driving voltage on the overall surface of the panel ([0021]) (note: the data electrodes structure of Kwon is solving the same problem as the applicant).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the data electrodes structure of Kwon in the device of Uchida for the purpose of improving the stability of the address discharge to the discharge cells, and also to maintain a uniform driving voltage on the overall surface of the panel.

Regarding claim 2, Uchida ('783) teaches (in at least fig. 1) the plurality of back electrodes (1a; i.e. the data electrodes) entering the discharge spaces at an entry side on a data driver extend with an electrode width constantly wide from the entry side (i.e. the peripheral portion) and constantly narrow from the middle to the end side.

Regarding claim 3, Uchida ('783) teaches (in at least figs. 1 and 2) the back electrodes (1A; i.e. the data electrodes) having the end portion wider than the central portion increases in width continuously from the central portion of the second (6) toward the peripheral portion of the second substrate.

Regarding claim 6, Kwon ('137) teaches (in at least figs. 2) at least one data electrode (21; i.e. the address electrode) is substantially symmetrical from a central portion of the electrode to each end portion of the electrode.

Regarding claim 8, Uchida ('783) teaches (in at least figs. 1, 2, and 6; abstract; also see the applicant provided English translation of the foreign reference) a plasma display panel driven by plurality of subfields forming one field, the subfields comprising: a writhing period during which writhing discharging occurs in discharge cells to be displayed; and a sustain period during which sustain discharging occurs in the discharge cells in which the writing discharging occurs during the writing period, the plasma display panel comprising: a first substrate (5; i.e. the front substrate), a plurality of pairs of scanning electrodes (2a) and sustaining electrodes (2b) arrayed oppositely and parallel in one direction, and a back substrate (6; i.e. the second substrate) with a plurality of back electrodes (1A; i.e. the data electrodes) arrayed in the other direction perpendicular to the scanning electrodes, with barrier ribs (7) in between to form discharge spaces; wherein the plurality of back electrode (1a; i.e. the data electrodes) entering the discharge spaces at an entry side on a data driver extend with an electrode width constantly wide from the entry side (i.e. the peripheral portion) and constantly narrow from the middle to the end side.

However, Uchida ('137) does not expressly disclose each data electrode of the data electrodes are wider in a top and bottom peripheral portion than in a central portion of a display screen.

Further regarding claim 8, Kwon ('137) in the same field of endeavor teaches a plasma display panel comprised of, in part, data electrodes (21 of fig. 1) wherein each data electrode of the data electrodes are wider in a top and bottom peripheral portion than in a central portion of a display screen for the purpose of improving the stability of the address discharge to the discharge cells, and also to maintain a uniform driving voltage on the overall surface of the panel ([0021]) (note: the data electrodes structure of Kwon is solving the same problem as the applicant).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the data electrodes structure of Kwon in the device of Uchida for the purpose of improving the stability of the address discharge to the discharge cells, and also to maintain a uniform driving voltage on the overall surface of the panel.

Regarding claim 9, Uchida ('783) as modified by Kwon ('137) at least one data electrode has a middle portion having a first constant width, opposite end portions having a second constant width, and respective tapered portions extending from the middle portion to each of the end portions (see Kwon at least fig. 1).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon et al., (US. Pub: 2005/0052137) of record in view of Uchida (JP: 2003-308783) of record.

Regarding claim 5, Kwon ('137) teaches all the claimed limitations except for the plural data electrodes continuously increase in width from the central portion of the second substrate toward the peripheral portion of the second substrate.

Further regarding claim 5, Uchida ('783) in the same field endeavor teaches (in at least figs. 1 and 2) a plural data electrodes (1a), wherein the plural data electrodes (1a) continuously increase in width from the central portion of the second substrate toward the peripheral portion of the second substrate. At the time of the invention, it would have been obvious to one of ordinary skill in the art to contemplate of using the plural data electrodes structure of Uchida in the device of Kwon for the purpose of improving the stability of the address discharge to the discharge cells, and also to maintain a uniform driving voltage on the overall surface of the panel.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELMITO BREVAL whose telephone number is (571)270-3099. The examiner can normally be reached on M-F (8:30 AM-5:00 Pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Toan Ton can be reached on (571)-272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2889

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bumsuk Won/
Primary Examiner, Art Unit 2889

April 24, 2010
/Elmito Breval/
Examiner, Art Unit 2889